Marcus Motzkus

List of Publications by Year
in descending order

77 papers	4,480 citations	126907 33 h-index	98798 67 g-index
77 all docs	77 docs citations	77 times ranked	2941 citing authors

#	Article	IF	Citations
1	Diffusion-Controlled Singlet Fission in a Chlorinated Phenazinothiadiazole by Broadband Femtosecond Transient Absorption. Journal of Physical Chemistry B, 2020, 124, 10186-10194.	2.6	6
2	Ultrafast Singlet Fission and Intersystem Crossing in Halogenated Tetraazaperopyrenes. Journal of Physical Chemistry A, 2020, 124, 7857-7868.	2.5	7
3	Flexible pulse shaping for sum frequency microspectroscopies. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 117.	2.1	2
4	Oxygen-catalysed sequential singlet fission. Nature Communications, 2019, 10, 5202.	12.8	15
5	Shaper-based infrared spectroscopy in a nonlinear Raman setup. EPJ Web of Conferences, 2019, 205, 03016.	0.3	0
6	Tailoring Ultrafast Singlet Fission by the Chemical Modification of Phenazinothiadiazoles. Journal of the American Chemical Society, 2019, 141, 8834-8845.	13.7	39
7	P-Protected Diphosphadibenzo[a,e]pentalenes and Their Mono- and Dicationic P-Bridged Ladder Stilbenes. Organic Letters, 2019, 21, 2033-2038.	4.6	20
8	Singlet Fission in Tetraaza-TIPS-Pentacene Oligomers: From fs Excitation to Î¼s Triplet Decay via the Biexcitonic State. Journal of Physical Chemistry B, 2019, 123, 10780-10793.	2.6	24
9	Excited State Vibrational Spectra of All-trans Retinal Derivatives in Solution Revealed By Pump-DFWM Experiments. Journal of Physical Chemistry B, 2018, 122, 12271-12281.	2.6	5
10	Substituting Coumarins for Quinolinones: Altering the Cycloreversion Potential Energy Landscape. Journal of Physical Chemistry A, 2018, 122, 7587-7597.	2.5	8
11	Ultrafast ring closing of a diarylethene-based photoswitchable nucleoside. Physical Chemistry Chemical Physics, 2018, 20, 22867-22876.	2.8	8
12	Invited Article: Coherent Raman and mid-IR microscopy using shaped pulses in a single-beam setup. APL Photonics, 2018, 3, .	5.7	14
13	Experimental and numerical investigation of a phase-only control mechanism in the linear intensity regime. Journal of Chemical Physics, 2018, 148, 214310.	3.0	5
14	Flexible and broadly tunable infrared light source based on shaped sub-10-fs pulses for a multimodal microscopy setup. Optics Letters, 2018, 43, 2054.	3.3	5
15	Photocleavage of coumarin dimers studied by femtosecond UV transient absorption spectroscopy. Physical Chemistry Chemical Physics, 2017, 19, 4597-4606.	2.8	23
16	Two-step kinetic model of the self-assembly mechanism for diphenylalanine micro/nanotube formation. Physical Chemistry Chemical Physics, 2017, 19, 31647-31654.	2.8	10
17	Minimization of 1/f^n phase noise in liquid crystal masks for reliable femtosecond pulse shaping. Optics Express, 2017, 25, 23376.	3.4	6
18	Vibronic coupling in the excited-states of carotenoids. Physical Chemistry Chemical Physics, 2016, 18, 11443-11453.	2.8	19

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19	Exploring the potential of tailored spectral focusing. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 1482.	2.1	28
20	Fast singleâ€beamâ€CARS imaging scheme based on in silico optimization of excitation phases. Journal of Raman Spectroscopy, 2015, 46, 679-682.	2.5	7
21	Enhancement of coherent anti-Stokes Raman signal via tailored probing in spectral focusing. Optics Letters, 2015, 40, 5204.	3.3	22
22	Unveiling Singlet Fission Mediating States in TIPS-pentacene and its Aza Derivatives. Journal of Physical Chemistry A, 2015, 119, 6602-6610.	2.5	65
23	Ultrafast Time-Resolved Spectroscopy of Diarylethene-Based Photoswitchable Deoxyuridine Nucleosides. Journal of Physical Chemistry Letters, 2015, 6, 4717-4721.	4.6	24
24	Ultrafast Interaction of Dark and Bright Electronic States in Open-Chain Carotenoids Investigated by Pump-DFWM. Springer Proceedings in Physics, 2015, , 440-443.	0.2	0
25	Ultrafast Interaction of Dark and Bright Electronic States in Open-Chain Carotenoids Investigated by Pump-DFWM. , 2014, , .		0
26	Multimodal nonlinear optical microscopy with shaped 10 fs pulses. Optics Express, 2014, 22, 28790.	3.4	29
27	Multidimensional Time-Resolved Spectroscopy of Vibrational Coherence in Biopolyenes. Annual Review of Physical Chemistry, 2014, 65, 39-57.	10.8	50
28	Acceleration of Singlet Fission in an Aza-Derivative of TIPS-Pentacene. Journal of Physical Chemistry Letters, 2014, 5, 2425-2430.	4.6	86
29	On the Investigation of Excited State Dynamics with (Pump-)Degenerate Four Wave Mixing. Springer Series in Chemical Physics, 2014, , 205-230.	0.2	2
30	Ultrafast branching in the excited state of coumarin and umbelliferone. Physical Chemistry Chemical Physics, 2013, 15, 17846.	2.8	48
31	Coherent High-Frequency Vibrational Dynamics in the Excited Electronic State of All-Trans Retinal Derivatives. Journal of Physical Chemistry Letters, 2013, 4, 383-387.	4.6	26
32	Mapping multidimensional excited state dynamics using pump-impulsive-vibrational-spectroscopy and pump-degenerate-four-wave-mixing. Physical Chemistry Chemical Physics, 2013, 15, 14487.	2.8	58
33	Highlighting short-lived excited electronic states with pump-degenerate-four-wave-mixing. Journal of Chemical Physics, 2013, 139, 074202.	3.0	13
34	Elimination of twoâ€photon excited fluorescence using a singleâ€beam coherent antiâ€Stokes Raman scattering setup. Journal of Raman Spectroscopy, 2013, 44, 1379-1384.	2.5	9
35	Full characterization of the third-order nonlinear susceptibility using a single-beam coherent anti-Stokes Raman scattering setup. Optics Letters, 2012, 37, 4239.	3.3	18
36	Multiplexing single-beam coherent anti-stokes Raman spectroscopy with heterodyne detection. Applied Physics Letters, 2012, 100, .	3.3	20

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37	Evidence for the Two-State-Two-Mode model in retinal protonated Schiff-bases from pump degenerate four-wave-mixing experiments. Physical Chemistry Chemical Physics, 2012, 14, 13979.	2.8	21
38	Vibrational analysis of excited and ground electronic states of all-trans retinal protonated Schiff-bases. Physical Chemistry Chemical Physics, 2011, 13, 21402.	2.8	22
39	Direct Observation of a Dark State in Lycopene Using Pump-DFWM. Journal of Physical Chemistry B, 2011, 115, 8328-8337.	2.6	40
40	Chemoselective imaging of mouse brain tissue via multiplex CARS microscopy. Biomedical Optics Express, 2011, 2, 2110.	2.9	45
41	Groundâ€•and Excitedâ€State Vibrational Coherence Dynamics in Bacteriorhodopsin Probed With Degenerate Fourâ€Waveâ€Mixing Experiments. ChemPhysChem, 2011, 12, 1851-1859.	2.1	34
42	Selective nonlinear response preparation using femtosecond spectrally resolved four-wave-mixing. Journal of Chemical Physics, 2011, 135, 224505.	3.0	15
43	Hyperspectral data processing for chemoselective multiplex coherent anti-Stokes Raman scattering microscopy of unknown samples. Journal of Biomedical Optics, 2011, 16, 021105.	2.6	29
44	Optimisation of two-photon induced cleavage of molecular linker systems for drug delivery. Journal of Photochemistry and Photobiology A: Chemistry, 2010, 210, 188-192.	3.9	14
45	Ultrafast multiphoton transient absorption of Î²-carotene. Chemical Physics, 2010, 373, 38-44.	1.9	15
46	Shaper-assisted full-phase characterization of UV pulses without a spectrometer. Optics Letters, 2010, 35, 3916.	3.3	10
47	On the paradigm of coherent control: the phase-dependent lightâ€“matter interaction in the shaping window. New Journal of Physics, 2009, 11, 105049.	2.9	11
48	Heterodyne singleâ€beam CARS microscopy. Journal of Raman Spectroscopy, 2009, 40, 809-816.	2.5	36
49	Multidimensional spectroscopy of Î²-carotene: Vibrational cooling in the excited state. Archives of Biochemistry and Biophysics, 2009, 483, 219-223.	3.0	45
50	Generation of phase-controlled ultraviolet pulses and characterization by a simple autocorrelator setup. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 1538.	2.1	18
51	Microanalytical nonlinear single-beam spectroscopy combining an unamplified femtosecond fibre laser, pulse shaping and interferometry. Applied Physics B: Lasers and Optics, 2008, 91, 213-217.	2.2	6
52	Quantum control spectroscopy of vibrational modes: Comparison of control scenarios for ground and excited states in Î²-carotene. Chemical Physics, 2008, 350, 220-229.	1.9	35
53	Time-resolving molecular vibration for microanalytics: single laser beam nonlinear Raman spectroscopy in simulation and experiment. Physical Chemistry Chemical Physics, 2008, 10, 681-691.	2.8	37
54	Controlling the efficiency of an artificial light-harvesting complex. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 7641-7646.	7.1	67

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55	Control of excited-state population and vibrational coherence with shaped-resonant and near-resonant excitation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 074024.	1.5	31
56	Molecular discrimination of a mixture with single-beam Raman control. Journal of Chemical Physics, 2007, 127, 144514.	3.0	21
57	Shaper-assisted collinear SPIDER: fast and simple broadband pulse compression in nonlinear microscopy. Journal of the Optical Society of America B: Optical Physics, 2007, 24, 1091.	2.1	36
58	Pump-Degenerate Four Wave Mixing as a Technique for Analyzing Structural and Electronic Evolution:Â Multidimensional Time-Resolved Dynamics near a Conical Intersection. Journal of Physical Chemistry A, 2007, 111, 10517-10529.	2.5	75
59	Rapid polymer blend imaging with quantitative broadband multiplex CARS microscopy. Journal of Raman Spectroscopy, 2007, 38, 916-926.	2.5	67
60	The photoinduced cleavage of coumarin dimers studied with femtosecond and nanosecond two-photon excitation. Chemical Physics Letters, 2007, 439, 308-312.	2.6	15
61	In situ broadband pulse compression for multiphoton microscopy using a shaper-assisted collinear SPIDER. Optics Letters, 2006, 31, 1154.	3.3	43
62	Highly sensitive single-beam heterodyne coherent anti-Stokes Raman scattering. Optics Letters, 2006, 31, 2495.	3.3	83
63	Enhancement of Raman modes by coherent control in Î²-carotene. Chemical Physics Letters, 2006, 421, 523-528.	2.6	58
64	Time-resolved two color single-beam CARS employing supercontinuum and femtosecond pulse shaping. Optics Communications, 2006, 264, 488-493.	2.1	52
65	Singlet versus triplet dynamics of Î²-carotene studied by quantum control spectroscopy. Journal of Photochemistry and Photobiology A: Chemistry, 2006, 180, 314-321.	3.9	38
66	Enhancement of molecular modes by electronically resonant multipulse excitation: Further progress towards mode selective chemistry. Journal of Chemical Physics, 2006, 125, 061101.	3.0	38
67	Pump-probe and pump-deplete-probe spectroscopies on carotenoids with N=9â€“15 conjugated bonds. Journal of Chemical Physics, 2006, 125, 194505.	3.0	71
68	Observation of all-trans-Î²-carotene wavepacket motion on the electronic ground and excited dark state using degenerate four-wave mixing (DFWM) and pumpâ€“DFWM. Chemical Physics Letters, 2005, 402, 283-288.	2.6	68
69	Pumpâ^'Depleteâ^'Probe Spectroscopy and the Puzzle of Carotenoid Dark States. Journal of Physical Chemistry B, 2004, 108, 3320-3325.	2.6	115
70	Micromirror SLM for femtosecond pulse shaping in the ultraviolet. Applied Physics B: Lasers and Optics, 2003, 76, 711-714.	2.2	99
71	Multichannel Carotenoid Deactivation in Photosynthetic Light Harvesting as Identified by an Evolutionary Target Analysis. Biophysical Journal, 2003, 85, 442-450.	0.5	84
72	Quantum control of energy flow in light harvesting. Nature, 2002, 417, 533-535.	27.8	648

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73	Evolutionary algorithms and their application to optimal control studies. Physical Review A, 2001, 64, .	2.5	181
74	A new high-resolution femtosecond pulse shaper. Applied Physics B: Lasers and Optics, 2001, 72, 627-630.	2.2	61
75	Optimal control of molecular states in a learning loop with a parameterization in frequency and time domain. Chemical Physics Letters, 2000, 326, 445-453.	2.6	192
76	Whither the Future of Controlling Quantum Phenomena?. Science, 2000, 288, 824-828.	12.6	1,045
77	Femtosecond Real-Time Probing of Reactions. 19. Nonlinear (DFWM) Techniques for Probing Transition States of Uni- and Bimolecular Reactions. The Journal of Physical Chemistry, 1996, 100, 5620-5633.	2.9	138